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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,309	02/07/2005	Kim Lui So	SO-2	6440

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08/14/2007

EXAMINER

PRICE, CARL D

ART UNIT	PAPER NUMBER
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3749

MAIL DATE	DELIVERY MODE
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08/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,309

Applicant(s)

SO, KIM LUI

Examiner

CARL D. PRICE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/07/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12, 14, 16-20, 22-24 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 14, 16-20, 22-24 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1:121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/13/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims rejected under 35 U.S.C. 103(a)

Claims 1-3, 16, 17, 19-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US00388929 (Lyon et al) in view of GB 2 207 746 (Chen).

US00388929 (Lyon et al) a self-cleaning exhaust system including:

- a first filter (106) in a path for an air flow;
- a first spray outlet (114) for providing a first spray into the air flow before the first filter which would inherently enable the first spray to be drawn along the path onto a first surface of the first filter;
- a second filter (108) in the path for the air flow;
- at least some of the droplets of the first spray are of a size inherently capable of combining with droplets of a contaminant carried by the air flow, whereby the combined droplets are captured by the first filter; and
- wherein the first filter (106) is shown (see figure 1) to be a relatively coarse filter and the second filter (108) is shown to be a relatively fine filter;
- a second spray outlet (118) located in said air flow path after said first filter for providing a second cleaning spray onto a rear (top) surface of said first filter (106).

US00388929 (Lyon et al) shows and discloses the invention substantially as set forth in the claims with possible exception to:

- wherein the first filter being a relatively coarse filter and the second filter being a relatively fine filter;
- the first spray outlet is at least one nozzle for providing a fine spray and the second spray is a relatively .

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GB 2 207 746 (Chen) teaches, from applicant's same gas treatment field of endeavor, a first relatively course filter (10) and a second relatively fine filter (21) and the second filter (108) is shown to be a relatively course filter, wherein the droplets of the first spray are of a size inherently capable of combining with droplets of a contaminant carried by the air flow, wherein combined droplets of cleaning fluid and small oily particles are captured by the first filter (see page 6, lines 4-25).

In regard to claims 1-3, 16, 17, 19-24 and 26, for the purpose of aiding in the removal of contaminants, it would have been obvious to a person having ordinary skill in the art to inject the droplets of the first spray at a size capable of combining with droplets of a contaminant carried by the air flow, such that the combined larger droplets of cleaning fluid and small oily particles are captured by the first filter, in view of the teaching of **GB 2 207 746 (Chen)**.

In regard to claim 3, 12 and 14, since the characteristics of the first and second sprays, and the inclination and orientation of the filters, for a given apparatus would necessarily depend on numerous design concerns such as properties and characteristics of the air flow (e.g. - volume of flow) and entrained contaminant (oily vapor, dust particle, etc.), to form the first sprayer to provide a fine spray and a second spray outlet for providing a coarse spray, and to arrange the filters to be inclined, can be viewed as nothing more than merely matters of choice in design absent the showing of any new or unexpected results produced therefrom over the prior art of record.

Claims rejected under 35 U.S.C. 103(a)

Claims 5-10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **US00388929 (Lyon et al)** in view of **GB 2 207 746 (Chen)**, as applied to claim 1 above, and further in view of **US006895954 (Swierczyna et al)**.

US00388929 (Lyon et al) shows and discloses the invention substantially as set forth in the claims with possible exception to:

- forming the hood with an intermediate baffle extending from the top wall; and

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- an upwardly directed projection of a plate extending forwardly from one of the front wall and the rear wall beyond the baffle, and wherein the fluid outlet (21) for treating fluid is mounted on the plate.

US006895954 (Swierczyna et al) teaches, form applicant's same gas separation field of endeavor:

- forming a the hood with an intermediate baffle (not referenced) extending from the top wall; and
- an upwardly directed projection of a plate (20) extending forwardly from one of the front wall and the rear wall beyond the baffle, and wherein the fluid outlet (21) for treating fluid is mounted on the plate.

In regard to claims 5-10 and 18, for the purpose of further aiding in the separation of contaminants by causing the flow of air to change directions to thereby cause at least some droplets to separate prior to being treated with the fluid stream, it would have been obvious to a person having ordinary skill in the art to provide the US00388929 (Lyon et al) hood with an intermediate baffle extending from the top wall as well as an upwardly directed projection of a plate extending and fluid outlet means in the manner set forth in applicant's claim, in view of the teaching of US006895954 (Swierczyna et al).

Conclusion

See the attached USPTO for, 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven B. McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Carl D. Price', with a stylized, sweeping flourish extending to the right.

CARL D. PRICE

Primary Examiner

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cp